Original Article

J Prev Med Public Health 2020;53:275-284 • https://doi.org/10.3961/jpmph.20.095

pISSN 1975-8375 eISSN 2233-4521

Journal of Preventive Medicine & Public Health

Educational Intervention Based on the Health Belief Model to Modify Risk Factors of Cardiovascular Disease in Police Officers in Iran: A Quasi-experimental Study

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Objectives: Police officers may be at a greater risk for cardiovascular disease (CVD) than the general population due to their high-stress occupation. This study evaluated how an educational program based on the health belief model (HBM) may protect police officers from developing CVD.

Methods: In this single-group experimental study, 58 police officers in Iran participated in a 5-week intervention based on HBM principles. Outcomes included changes in scores on an HBM scale, time spent on moderate to vigorous physical activity (International Physical Activity Questionnaire), body mass index (BMI), blood lipid profile, blood glucose, and blood pressure. The intervention consisted of 5 HBM-based educational sessions. Follow-up was conducted at 3 months post-intervention. The paired *t*-test was used to examine differences between baseline and follow-up scores.

Results: All aspects of the HBM scale improved between baseline and follow-up ($p<0.05$), except the cues to action subscale. Self-efficacy and preventive behaviors improved the most. BMI decreased from 26.7 ± 2.9 kg/m^2 at baseline to 25.8 ± 2.4 kg/m^2 at follow-up. All components of the lipid profile, including triglycerides, cholesterol, high-density lipoprotein, and low-density lipoprotein, showed significant improvements post-intervention. Blood glucose and blood pressure also decreased, but not significantly. Nearly 25% of participants who were not physically active at baseline increased their physical activity above or beyond the healthy threshold.

Conclusions: A relatively brief educational intervention based on HBM principles led to a significant improvement in CVD risk factors among police officers. Further research is needed to corroborate the effectiveness of this intervention.

Key words: Health education, Lifestyle, Cardiovascular disease, Behavior change, Risk factors, Iran

Received: March 28, 2020 Accepted: May 20, 2020

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INTRODUCTION

Cardiovascular disease (CVD), which has been recognized as a major cause of mortality and morbidity around the world [1], includes disorders such as hypertension, coronary heart disease, atherosclerosis, and stroke that involve pathologies of the heart and blood vessels [2]. Nearly 18 million people died from CVD in 2016, accounting for one-third of all deaths at the

